



SAN BERNARDINO MICROWAVE SOCIETY, Incorporated

FOUNDED IN 1968

A NONPROFIT AMATEUR TECHNICAL ORGANIZATION DEDICATED
TO THE ADVANCEMENT OF COMMUNICATIONS ABOVE 1000 MC.

W6IFE Newsletter

November 2004 Edition

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At the **4 November** SBMS Doug Millar K6JEY will talk on "A Comparison of newer DSP Units for use with Microwave IF Rigs." Besides a very small introduction to DSP, Doug will describe the assets and liabilities he has experienced using Timewave, NIR and W4RT DSP units with his IF rigs. There will be a demonstration of the NIR 10 and W4RT DSP units. Attendees can bring their own DSP units and power supplies to compare their effectiveness. The SBMS meets at the American Legion Hall 1024 Main Street (south of the 91 freeway) in Corona, CA at 1900 hours local time on the first Thursday of each month. Check out the SBMS web site at <http://www.ham-radio.com/sbms/>.

SBMS meeting parking- We have become a great number of members at meetings. We park next to the church in the adjacent lot or on the street and or in the lot across the street. Across the street the sign on the building

shows: 1025 Main Street. MAIN STREET BISTRO. The sign on the parking lot says: CLIN CHIROPRACTIC CARE Dick, WB6DNX

A reminder that the third Saturday of each month is Microwave Activity Day starting around 10 am through mid afternoon.

Last meeting- Brian, W6BY visited from Alamo CA. Welcome. Most of the meeting was spent on discussing the 10 GHz contest. See MUD 2005 section for that discussion. Dick, WB6JDH is our new member. 31 people present.

Scheduling.

2 December 2004 Dave WA6CGR will demonstrate noise figure measurements.

6 January 2005 Dennis WA6NIA will talk about EME operations.

3 Feb Dick K6HIJ What is the perfect IF rig.

Activity reported at the October SBMS meeting: Mel, WA6JBD roved the high desert during the second half of the contest (DX was 577 miles); Dick WB6DNX spent Sunday at Chino Hills; Frank, WB6CWN went to Corey Pk where he was blown off the hill, Sunday was at Saddle PK (DX 1175 km); Chuck, WA6EXV roved Goleta and Ventura working Mexico in both places; Bill, WA6QYR was at Frazier on Saturday and roved the coast on Sunday (DX 871 km); Jeff KN6VR was on 10 GHz finally and operated from Frazier; Ken, W6DTA went to DL29 where it was windy and cold then moved to DM10 where they didn't have liaison; Doug, K6JEY sold some equipment and had W6IFE QSL cards to pass around; Dennis, WA6NIA was at SS51 during contest; Peter K6PTL is working on a 10 GHz rig; Paul, N6DN roved the SJV; Brian, W6BY roved the Sacramento area then went to Frazier; Coll, KC6RWR has a 10 GHz rig in work; xxxx AD6HT went to Keller PK for lots of contacts; Mike, W6YLZ went to Saddle PK had some 100k points worked KE6HPZ 26 times; Dave, WA6CGR roved (DX 1068 km); Dan W6DWF worked on Cactus; Pat, N6RMJ had brake problems (DX 1028 km); Wayne, KH6WZ had rig problems; Larry roved with speedy Chip; Chip, N6CA drove north to Utah 1920 miles of roving, has a "space ball antenna positioner that works; Dick, WB6JBH had his first outing on 10 GHz and made 19 k points with 100 QSO's and 42 call signs(not bad for a first time out); Dick, K6HIJ worked on switches; Larry K6HLH dumped his dish in the wind but got it working again; Glenn KE6HPZ did lots of roving (68K points); Chris, N9RIN had fun with his own rig this time (130 QSO's)

"Wants and Gots for sale"

Want WR75 transitions. 10 GHz mixer, WR90 and WR75 flanges, 10 GHz filter John KJ6HZ 909-683-1434

Want six runs of 7/8th inch hardline 100 ft each Mike W6YLZ 818-349-8525

Want WR90 waveguide Switch 28v and TWT power supply RWN320 for RW2135 tube Jeff KN6VR 760-948-7227

For Sale: a very large quantity of silver-plated brass flanges in WR42 UG-595/U (WG-20) cover flange. These are clean, ready to solder brass flanges in excellent condition for your K-band projects. The waveguide fits into this flange and butts up against the inside of the flange so you do not have waveguide exposed at the flange interface. Price is \$6.00 per flange plus shipping. Reply direct by email n6ax@speakeasy.net. Shipping costs will be dependent on quantity purchased. I ship UPS, USPS or FedEx. Check my ebay screen name n6ax to see my feedback (all positive) and order with confidence. Thanks John, N6AX John, N6AX (714) 993-0435

Chairman: Pat Coker, N6RMJ of SBMS

Planning Committee: Pat Coker, N6RMJ of SBMS

David Peters, KI6FF of WSWSS

Dennis Kidder, WA6NIA of SBMS

Presentations: Chip Angle, N6CA

Publicity: Wayne, KH6WZ

PRIZES: Dave Glawson, WA6CGR

Registration & Finance: Dick Kolbly, K6HIJ

Family Program: still needs a leader

Location: Cerritos Sheridan

List of Presentations:

SBMS 50 YEARS Dick Kolbly, K6HI

Dave, W6IFF made a tri-fold flyer for Wayne to pass out at the MUD 2004. Bring ideas for a logo and thoughts for tee shirts, hats, polo shirts, and etc to the November meeting.

Notes from MUD 2004

I just got back from MWU 2004 and have to say it was excellent. Thanks to NTMS and Al Ward for doing a great job hosting it! I was talking to Paul Wade about PC board etching at home and he suggested I post this pointer to "Think and Tinker Ltd" <http://www.thinktink.com>. I use their techniques and supplies to make Teflon boards at home and I'm very pleased with the results. - Gary ad6fp

Forwarding from Will in case it didn't hit the reflector.73, Joe - N5PYK

----- Original Message ----- From: W0EOM@aol.com To: n5pyk@hotmail.com Sent: Monday, October 18, 2004 4:13 PM Subject: Re: [Mw] Microwave Update presentations available on the NTMS site

Hi Joe - I thought the conf. was one of the best ever. I know it is a lot of work, so thanks again to all who helped put it on. Perhaps I should have mentioned that I can get more of the triplers to 38/40 GHz, +15 to 18 dbm out, which I use for the 80/120 GHz diode multipliers. \$35 ea or 3 for \$100, mailing in the US included. Will Jensby 645 Giannini Dr, Santa Clara, CA 95051

New item found at MUD 2004 at DEM table-

DEM Part Number 3-8PA - 8W, 10GHz amplifier:

No info on their web site, but here are some numbers from the prelim spec sheet:

10-10.5GHz

8W nominal at 1dB compression

10W nominal saturated

1.0W input for linear operation, 1.2W max (Hmmm - Qualcomm PA as driver?)

return loss less than 10dB at 10.368GHz

13.8VDC at 5A for nominal output, 15V max

SMA (f) only

Built- only

active devices: NEZ (NEC?) 1011-3E

Price: \$295

A possible game-changer for this band?

Wayne KH6WZ DM03xq

Hi all, I want to thank everyone for the fabulous attendance at Microwave Update 2004. Al, Bob, and Kent did a super job of organizing the event and everything went off very nicely. I've uploaded the presentations to the www.ntms.org site. Do let me know if you encounter any problems with it! 73, Joe-N5PYK President, NTMS

Hi all -

I just finished plowing thru the stuff from MUD. Here is another neat announcement from the event:

From Paul, W2PED: Available Soon 24GHz LNA 47GHz amplifier

Contact W2PED pdrexler@hotmail.com. In any case, looks like Paul is doing some good work for us just getting ready to go to the higher bands! -de KH6WZ

HI- MUD 2004 was great! I came home with the suitcase loaded with like 30 pounds of small boxes, test things and parts. Over a million freebee parts- smd, through hole parts, crystals. The flea market was super with all the parts of things available. Programming of reflock boards measuring oscillator phase noise, measuring NF and gain on all the microwave bands. Tech talks were right on the popular topics of the day. Super time for a microwaver. Bill WA6QYR

73's Bill

Microwave Update 2004 in Pictures



Joe, N5PYK programming reflock boards.



Measuring noise figure and gain of amplifiers.



Dave, WW2R measuring of oscillator phase noise. Listening to the technical talks.



Kent Britain, WA5VJB leading an auction of good stuff. The Banquet prize table full of good items.



Peter Day, G3PHO (center) surrounded by MUD participants. The Ladies prize table.

Fellow Microwavers,

The US Geological Survey site provides a computer program to compute magnetic declination (compass variation) for any location given its latitude and longitude or given a location such as a city nearby. Now that so many of us have GPS units, once the lat/long of a place has been logged, the magnetic declination can be computed and logged as well.

The USGS site is: www.ngs.noaa.gov/index.html under NGS Geodetic Tool Kit. Select Magnetic Declination to access the program. For example, I entered 30.228 degrees North, 097.850 degrees West, and an elevation of 780 feet and today's date of 7-23-2001. The program gave a magnetic declination for this location (in Austin, TX) as being plus 5 degrees 50 minutes, the angle measured from true North through 180 degrees with positive values being East of North and negative values being West of North. The relationship is then True bearing = Magnetic bearing + Magnetic declination. Note that some of the programs are downloadable.

The program responds to your input with a page titled Synthesis Results which has many computed values including three pages of definitions and examples to make it easy to use and interpret. This should improve the accuracy of results in aligning antennas using compasses!

As to GPS bearings as noted by Steve Bragg, the GPS unit does not give the North point directly--the GPS unit must be moved. One possible use of your GPS unit occurs to me as follows: Take the lat/long of a high point a few miles from and in view of the proposed antenna location (next to a cell phone antenna or other prominent structure that can be seen from afar) and mark as a waypoint, then proceed to the antenna site and take a second lat/long and mark as a waypoint. Set the antenna over the second waypoint and sight (boresight) the antenna on the first waypoint. The GPS will give the bearing between the two waypoints, so rotate the calibrated dial to indicate the bearing of waypoint 1 from waypoint 2 while the antenna is pointing at waypoint 1. The zero point on the dial should then indicate the North point when the antenna is then rotated to point to zero. Obviously, the calibrated protractor (or pointer) has to be able to be rotated easily to accomplish this, so use a friction fit for the chosen moveable element. If the distance for this baseline is only on the order of a few to ten miles or so, corrections for the curvature of the earth should not be needed. An advantage to this procedure, assuming that it works as described, is that one does not have to do any advanced calculations or preparations. I caution the reader that this procedure has not been tried, it is theoretical only, and I am not very experienced in using my GPS as yet. I welcome some enterprising microwaver to try it and report back to the community as to how well it works. Have fun! Lloyd, N5GDB, Roadrunners Microwave Group n5gdb@texas.net email of Sept 2001



An interesting truck at MUD 2004. Multi-band loops on a boom with a hydraulic piston to lower them when going into the garage or under something.

The San Bernardino Microwave Society is a technical amateur radio club affiliated with the ARRL having a membership of over 90 amateurs from Hawaii and Alaska to the east coast and beyond. Dues are \$15 per year, which includes a badge and monthly newsletter. Your mail label indicates your call followed by when your dues are due. Dues can be sent to the treasurer as listed under the banner on the front page. If you have material you would like in the newsletter please send it to Bill WA6QYR at 247 Rebel Road Ridgecrest, CA 93555, bburns@ridgecrest.ca.us, or phone 760-375-8566. The newsletter is generated about the 15th of the month and put into the mail at least the week prior to the meeting. This is your newsletter. SBMS Newsletter material can be copied as long as SBMS is identified as source.

San Bernardino Microwave Society newsletter

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USA